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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,304	09/30/2003	You-Seung Jin	9898-302	8176

7590 11/01/2004
MARGER JOHNSON & McCOLLOM, P.C.
1030 S.W. Morrison Street
Portland, OR 97205

EXAMINER

ABRAHAM, FETSUM

ART UNIT	PAPER NUMBER
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2826

DATE MAILED: 11/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/676,304

Applicant(s)

JIN ET AL.

Examiner

Fetsum Abraham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) all is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The election made on 8/12/094 has been acknowledged and approved. The non-elected claims have been withdrawn from consideration.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-4, 17 are rejected under 35 U.S.C. 102(a) as being anticipated by the prior art of figure 1 in the application. Figure 1 discloses a MOSFET comprising a substrate (100) having a first thick region and a relatively thin second region, a gate insulation layer (110) formed on the first region, a gate electrode (120) on the gate insulation, epitaxial layers (150, 160) formed on the second region with predetermined thickness, spacers formed on the sidewalls of the gate electrode and part of the upper surface of the epitaxial layers, lightly doped regions (150) formed below the spacers in the epitaxial layers, and heavily doped regions (160) in a portion of the substrate exposed by the spacers.

As for claim 2, the layers are silicon.

As for claims 3, 4, the sum of the thickness of the epitaxial layer and the second region is greater than the thickness of the first region.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5,6,8,18,19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the same prior art.

Although the dimensions of the layers in the prior art are unknown, it would have been obvious to one skilled in the art to relate them to the claimed dimensions since layer thickness is a variable element that changes from a structure to another heavily depending on processing time, diffusion or epitaxial temperature and layer conductance.

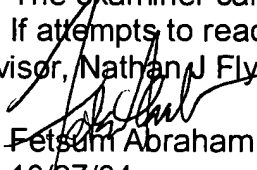
As for claim 6, polysilicon for gate electrodes is notoriously known in the art to be an alternate material to metals and silicon dioxide for gate insulation of MOSFETs, the most basic in the art.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over the same prior art in view of Tsai et al (5,648,287).

Although the prior art omits double-layered sidewalls in the MOSFET, the secondary reference shows the missing element in the same structure in the front page. Therefore, it would have been obvious to one skilled in the art to utilize double sidewalls in the prior art and in any other MOSFET since that better protects the gate from cross-talk induced problems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fetsum Abraham whose telephone number is: 571-272-1911. The examiner can normally be reached on 8:00 - 18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J Flynn can be reached on 571-272-1915.


Fetsum Abraham
10/27/04